INTRODUCTION

A saddle-nose deformity is most visibly characterized by a loss of nasal height. This deformity has also been described as a pug nose or boxer's nose both of which refer to various degrees of nasal dorsal depression. This often accompanies a shortened nose and compromised nasal support structures ***(Alsarraf and Murakami, 1999).***

A Saddle nose deformity can be congenital or acquired, but most saddle-nose deformities are acquired. The most common causes of saddle-nose deformities are traumatic and iatrogenic ***(Beekhuis, 1975).***

Biological grafts, autografts or allografts have been used in correction of saddle nose deformity such as cartilage and bone. Infection, vascular necrosis, atrophy, resorption and limited amount of material supply, are the main draw backs of biological grafts ***(Donald, 1986).***

The disadvantages of biological grafts, gave attention to the use of synthetic materials. The later should have a high degree of biocompatibility, shouldn't be extruded or resorbed, easily measured, contoured, in expensive, not carcinogenic with no risk of transmission of any form of infection and with successful animal studies before clinical application ***(Bingham and Hawthorne, 1992 a).***

Different synthetic materials have been used in correction of the saddle-nose deformity such as precious metals (Titanium, gold,

silver, metal alloys), inert bio implants (coral, ivory) and synthetic compounds (silicone, polytetrafluorethylenes, polyamide mesh). These materials didn't fulfill optimal criteria and showed many disadvantages e.g. considerable F.B. reaction, infection, absorption and lysis ***(Sclafani et al., 1997, Roma et al., 1998 and Niechajev, 1999).***

Bioglass® "45S5" is a bioactive glass ceramics which is composed of 45% silicone dioxide, 24.5% calcium dioxide, 24.5% sodium oxide and 6% phosphorous pentoxide ***(Shapoff et al., 1997).***

Bioglass® is a osteoconductive resorbable, bioactive glass which has the most potent effect on bone cell function, The surface of the layer similar to mineral phase of bone. Bioglass® particles remodel in the presence of osteogenic precursor cells, providing a scaffold for new bone growth and holding dimensions until the host bone takes over ***(Kim et al., 1989).***

Fortunately, the constituent chemical of Bioglass® (calcium, sodium, phosphate and silicate) are all found in the body and at the concentration derived from an implant didn't disturb the adjacent tissues. Many tests showed that Bioglass® was not carcinogenic nor toxic to any of the tissues or systems with which it was in contact ***(Wilson et al., 1981).***

Any material which allows close contact of living cells at its surface, which doesn't contain leachables which produce inflammation and which doesn't prevent growth and division of cells in culture, can be considered biocompatible, such materials are the Bioglass® ***(Wilson et al., 1981).***